



RETIREES PICNIC—Scenes from the Union Carbide Retirees Association picnic at Clark Center Park are shown on page 4.

## The energy advisor. . .

*Editor's note: Last issue we inaugurated a series of energy conservation features which will be alternated with questions from readers to the "Energy Advisor" on conservation-related topics. The articles will be written by Nuclear Division staff members about their conservation experiences or research, with Energy Division's Merl Baker (alias the Energy Advisor) coordinating the series. Employees with questions or ideas for articles should contact their Nuclear Division News representative listed each issue in the masthead.*

**QUESTION:** We have an old electric hot water heater in our basement. On top of it we have a dehumidifier which runs in the damp summer. Can one of the new electric heat pump water heaters be arranged to perform both functions at a savings in total cost? When can I buy one? Where?

**ANSWER:** A heat pump water heater will simultaneously dehumidify and cool the air within the house as it heats the water in the tank. Experimental units consume about 40 percent as much electricity as an electric water heater. The dehumidification would be "free."

TVA is one of the utilities placing experimental units in the field. An interested TVA customer should contact Robert Hemphill's office, Rates and Conservation, Chattanooga.

Manufacturers will probably not promote the sale of units until completion of the field-test experiments now getting under way.

**QUESTION:** What are some practical ways to reduce energy consumption by air conditioners?

**ANSWER:** The start is the selection of an energy efficient unit. Attic insulation and ventilation are quite helpful. Shades or screens over sunlit

windows are very cost effective. Generally, windows should be closed if the outside temperature is 80 degrees F or above. When the outside air drops to 70 F or below, the air conditioning unit should be stopped and outside air circulated through the house with the help of a fan.

A well insulated house, cooled to 70 degrees F and closed up, will be slow in warming to 80 degrees F. The need for the air conditioner is delayed significantly.

Lights should be used as little as possible.

**QUESTION:** When electric utilities, such as TVA, offer interest-free loans to their customers for conservation improvements, aren't these costs just passed on in another form—higher electricity rates?

**ANSWER:** Interest-free loans provided by utilities for conservation are at the expense of all rate payers. State regulatory authorities usually require investor-owned utilities to charge a rate of interest at least as much as the utility has to pay. Some federally or locally regulated utilities, TVA and Seattle City Light, for example, subsidize conservation measures of customers.

TVA offers interest-free loans for insulation and storm windows for any

## \$43 million to Carbiders in Savings Plan pay-off

A cash distribution of approximately \$43.0 million will be made July 2 to employees at facilities in Oak Ridge, Tenn., and Paducah, Ky.

The money is being distributed to 15,192 participants in the Carbide Savings Plan.

The amount of money received by employees at the Oak Ridge facilities totals \$38.1 million, while employees at the Paducah Gaseous Diffusion Plant received approximately \$4.9 million.

Every two years, participants in the Carbide Savings Plan receive the money they have saved, plus a company contribution, plus interest. Nationwide this year, the payout to some 59,757 participating Union Carbide employees totals \$171.4 million—\$128.1 million in savings, \$26.9 million in company contributions, and \$16.4 million in earned interest.

Under the Savings Plan, an employee may authorize payroll deductions up to 7 1/2 percent of his/her earnings. The company contributes 10, 20 and 30 percent of this amount, depending on whether the employee has one, two or three or more years of company service.

Union Carbide employees living in Oak Ridge received approximately \$11.7 million, while employees in Knox County received \$11.0 million. Distribution to employees in other areas included: Anderson County, \$4.1 million; Roane County, \$5.4 million; and Loudon County, \$2.3 million. An additional \$3.6 million was received by employees living in other areas of Tennessee.



**PLEDGES SUPPORT**—Union Carbide Corporation has offered a \$100,000 guarantee as security in the financing package for EXPO '82. Carbide's guarantee is presented by Roger F. Hibbs, President of the Nuclear Division, center, to Jake Butcher, Chairman of the Board for the Knoxville International Energy Exposition, left, as John Proffitt, President of the Greater Knoxville Chamber of Commerce, looks on. "We are pleased to be able to support EXPO '82," Hibbs stated. "Having an international exposition in Knoxville will not only benefit the Greater Knoxville area and East Tennessee, but will have a positive effect on the entire state and the Southeast region."

electric heating or electric cooling customer provided that the customers meet specified standards.

TVA has to pay interest on this money and it is accounted for in the "power fund." All customers pay. TVA and some other utilities argue that this is justified because new generating capacity is deferred. In reality, generating capacity is dependent on the peak demand load and not the average load. Conservation reduces both the peak and average load, but for most utilities the reduction in "peak" will be less than the decrease in the

average. No history is available to forecast whether or not TVA's plan will save all rate payers by deferring the need for new plants.

TVA and other utilities have variable and fixed costs. Conservation will reduce the number of units of electricity delivered per customer. Costs of providing service to each customer will not decrease as much as the reduction in energy supplied. This is another cost of conservation.

Conservation is necessary but it is likely to result in increased rates, especially when interest-free loans are provided by the utility.

## question box. . .

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

### Life expectancy

**QUESTION:** I have heard that the average Nuclear Division employee who retires at age 65 receives only 17 retirement checks. Is this so?

**ANSWER:** No, it isn't. Out of the 1,440 employees who have retired at age 65 between 1947 and 1979, 1,031 are still living.

A study was made of the 259 employees who retired at age 65 during the 15-year period between 1947 and 1961. One hundred ninety-one of these retirees have now died, so we know how long they lived. The remaining 68 who are still living are now between 82 and 95 years of age. If we take into consideration the present anticipated life expectancy of the 68 still living, we can calculate the average life expectancy for the entire group of 259 retirees, with confidence that the margin of error will be small. The anticipated life expectancy for this group of 259 employees, calculated in this matter, is 14.1 years.

These estimates compare to a nationwide average life expectancy of 13.7 years for 65-year-old white males, who constituted over 80 percent of the retirees involved (from the Health, Education, and Welfare annual report for 1976, titled "Vital Statistics of the United States").

### Foul language

**QUESTION:** In the A-Wing of K-1001 at ORGDP, every morning a man can be heard cursing and using all manner of foul language with or without women present. Can't management do something about this?

**ANSWER:** We should be able to correct the kind of situation you describe, but would need more specific information. Please call this matter to the attention of your supervisor and/or the Employee Relations manager at your installation.

### Contributory retirement

**QUESTION:** The recent article on the Pension Plan indicated that a number of employees are still participating in the Contributory Retirement Plan. If the Company payments into this plan offset against the Pension Plan, why do some employees still stay in the Contributory Plan?

**ANSWER:** Over the years more and more employees have decided that it is not to their advantage to continue participation in the Contributory Retirement Plan. In our own Division we have gone from 3,826 participants in 1967 to 397 participants as of May 31, 1979.

In the early days the Contributory Retirement Plan included options that were not available under the Pension Plan. At the present time, however, most of the former advantages of the Contributory Plan have been incorporated in the Pension Plan, although the "10-year-certain" feature and Contingent Annuitant Option of the Contributory Plan can provide payments to an individual not eligible for a survivor's benefit under the Pension Plan. On the other hand, being a participant in the Contributory Retirement Plan in some instances actually detracts from the overall return to an employee's spouse in the event of his/her death.

The pros and cons are too complicated to cover here. Each individual still in the Contributory Plan should discuss the matter with the Benefit Plans Office and make his/her own determination as to the best course of action.

## Patent granted. . .

To George R. Peterson, Y-12 Plant, for "Method for Preparing Metallated Filament-Wound Structures."

## Bond buyers invite others in

Employees who are not enrolled in the Company's Payroll Savings Bond program have received a letter from Nuclear Division President Roger F. Hibbs, asking them to join the more than 12,100 employees who are. Nuclear Division men and women are purchasing more than \$3,005,000 a year in Savings Bonds through the program.

Those who have not already enrolled have been urged to complete the authorization card at their earliest convenience and return it to their Benefit Plans office.

Employees hired during the past year may not have been offered the opportunity to participate in the program. It is hoped that each employee will give serious consideration to putting a portion of his/her savings in U.S. Series E Savings Bonds.

The reasons for the popularity of Savings Bonds are not hard to find:

### Reasons for buying

- They are easy to cash.
- They are safe and indestructible.
- The interest rate is good.
- Interest on Savings Bonds has been raised from six percent to six and one-half percent. The raise, approved May 10, by President Carter, will apply to Series E and H Savings Bonds issued as of June 1, if they are held to maturity, and to the recently announced series EE and HH Bonds which will go on sale in 1980.

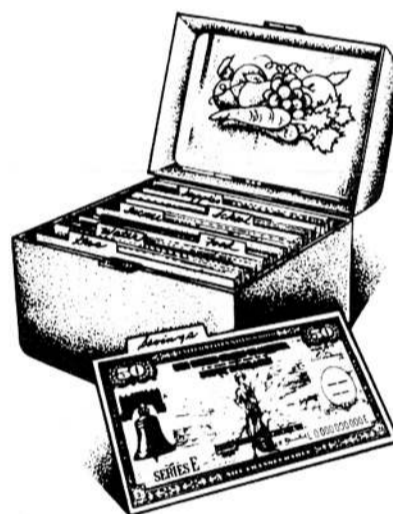
There are a number of tax advantages which raise the effective yield. The interest is exempt from all state and local income or personal property taxes. It, of course, is subject to federal income tax. The tax, however, does not have to be paid until the Bonds are cashed, and you can select the time to cash them. In addition, there are a number of ways to minimize or eliminate the tax altogether by buying the Bonds with your children as owners or postponing the cash until after you have retired.

### Easy to sign up

Signing up is easy. Select the amount of money you want to save each pay period; not less than 50 cents per week or \$2 per month. Show the name, address and social security number of the person you want shown as owner and co-owner or beneficiary. Sign and date the card and send it to your Benefit Plans office.

Answers to many questions can be found in the literature to each employee. The interest you receive on your Savings Bonds will be greater than that shown on the literature due to the recent increase. If you have other questions or should want assistance in completing the enrollment card, the Benefit Plans office at your plant will be glad to help you.

## Recipe for savings.



**Take stock in America.  
Buy U.S. Savings Bonds.**

## ORGDP United Way committee, division reps make plans for September drive



FROM LEFT TO RIGHT: Charlie Allen (plant chairman), Paul Melroy, Bob Cable, Mike Friend, Jim Griffin, Jim Heiskell, Buck Alexander, Mary Frances Tolliver, Lee Ford, Mike Willard, Alice Phibbs, Whitt Whittlesey, Carol Kendrick, Jama Hill, Mae Jean King, Bea James, Wayne Wood,

Margaret West, Louise Bentley, Rick Benson, Mike Rouse, Truman Trotter, Jim Dalton, Carson Baldwin, Larry Long, Phil McGinnis, John Ford, Harry Brown and Joe Jennings.



Adams



Gambill



Gibson



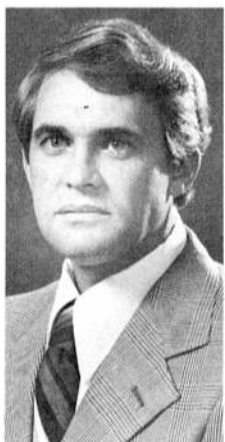
Lewis



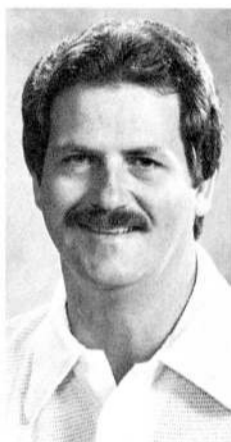
McGhee



Simmons



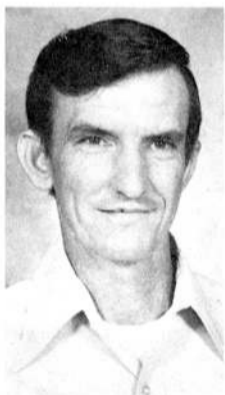
Woodall



Campbell

## 10 promoted at Y-12 Plant

Ten new supervisors have been named in the Y-12 Plant. In Fabrication Edward T. Adams, James F. Gambill, Wayne Gibson, Hubert R. Lewis, Edsel L. McGhee, James V. Simmons and Jack P. Woodall have been promoted. Don P. Campbell Jr., Joe Tackett and George A. Yarborough have been named supervisors in Utilities Administration.



Yarborough



Tackett

**Tackett**, a native of Anderson County, worked with the L & N Railroad before joining Union Carbide in 1967. He and his wife, the former Linda Slusher, live at Route 5, Clinton. They have two children, Joe and Christopher.

**Yarborough**, a native of Covington, Va., joined Union Carbide in 1967 after working with the Singer Company. He and his wife, the former Jean Price, live at Route 2, Oliver Springs. They have two daughters, Pamela and Wendy.

**Woodall**, a native of Rockwood, joined Union Carbide in 1968. Before that, he worked with Combustion Engineering and Sanford-Day. Mrs. Woodall is the former Louise Ryans, and the couple lives at Route 4, Rockwood. They have two daughters, Karen and Kathy.

**Campbell**, a native of Loudon, was employed with Eaton, Yale and Towne Corporation before coming to Y-12 in 1967. He and his wife, the former Gail McNabb, live at 820 Highland Avenue, Loudon, with their children, Randy and Marli.

**Adams**, a native of Knoxville, joined Union Carbide in 1968 after working with the W. J. Savage Company. He and his wife, the former Claudia J. Capps, live at 4003 East Columbia Avenue, Knoxville. They have two sons, Stanley and Richard.

**Gambill** was born in Lenoir City, and worked with Robertshaw Controls before joining Union Carbide in 1968. He has two daughters, Becky and Nancy, and lives at 9900 Westland Drive, Concord.

**Gibson**, a native of Brisbane, Australia, is a graduate of the Tennessee Institute of Electronics. After working with the Robertshaw Controls Company, he joined Union Carbide in 1968. Married to the former Judy C. Neeley, he lives at Route 15, Boomerang Lane, Knoxville. They have two children, Kimberly and Terry.

**Lewis**, a native of Knox County, worked with Plasti-Line before coming to Y-12 in 1963. He and his wife, the former Patricia Beeler, live at Route 13, Salome Lane, Knoxville. They have two sons, Bryan and John.

**McGhee**, a native of Clinton, was employed by the State of Tennessee, Combustion Engineering and Industrial Machine Company. He came to Y-12 in 1960. Mrs. McGhee is the former Charlotte Blake, and they live at 811 Skyline Drive, Clinton.

**Simmons** was born in Knoxville and joined Union Carbide in 1969. He and his wife, the former Pauline Hutchison, live at 8401 Marvel Lane, Knoxville. They have two sons, Micah and Michael.

## Perey named UCC fellow

Francis G. Perey, a member of the staff of the Engineering Physics Division at ORNL, has been designated as a Corporate Research Fellow of Union Carbide Corporation.

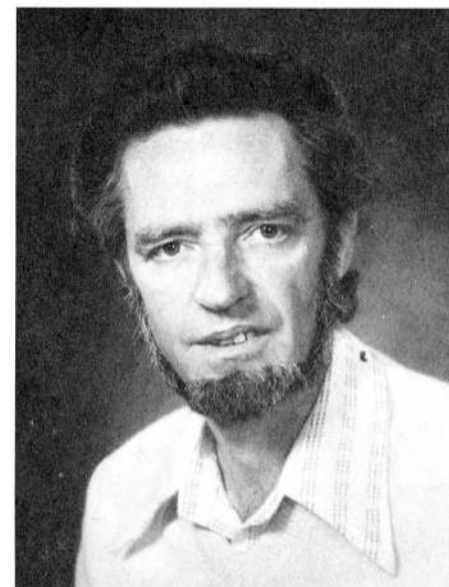
Announcement of the honor was made by Roger F. Hibbs, President of the Nuclear Division. Hibbs said that such designations are made on a limited basis to those who have chosen research and development as a professional career and whose contributions have been both significant and continually high over a period of many years.

Perey was recognized for his work in nuclear data for applications. His efforts in this area have helped determine the course of the nation's nuclear data measurement program. He has led U.S. development of uncertainty and covariance information for nuclear data. Other accomplishments include: development of a nonlocal optical model which has been widely used in research; leader of a group which developed a technique for high resolution neutron scattering measurements and produced a major part of all existing data for gamma ray production by energetic neutrons.

As an outgrowth of his work with uncertainty and covariance information for nuclear data, Perey has developed a straightforward analysis method for determining neutron spectra used in the irradiation of reactor materials.

Perey is a Fellow of the American Physical Society. He has represented the United States at national and international nuclear data meetings.

He received his bachelor's and master's degrees in physics from



Francis G. Perey

McGill University in Montreal and his PhD in physics from the University of Montreal. He has been a member of the staff at ORNL for the last 19 years.

Perey and his wife, Claire, live at 157 Nebraska Avenue, Oak Ridge. They have two children.

## Rescue squad relies on United Way

Local Rescue Squads rely heavily on United Way assistance to provide vital equipment needed to help save lives and search for drowning victims. Nuclear Division employees in all four of the plants dedicate many hours of their time, all without pay, to this community service. Commented an employee recently, whose son was drowned last summer, "I will be in their debt all of my life. They spent five or six weeks until they found my son's body. Many stayed on the scene for days."



Jack Webb, Ralph McMillian and Steve Breeden



Gus Testerman, Ed Bishop, Ernest Braden, Earl Tweed with "Jaws of Life"

## Enjoying the leisure life. . .



**Paul E. Clabough**  
Operations,  
ORGDP  
35 years service



**Owen A. Hammonds**  
Tool Grinding,  
Y-12  
27 years service



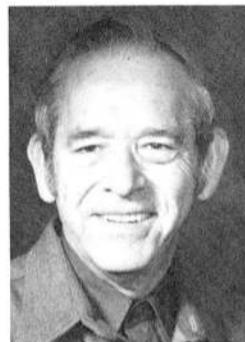
**Sanders H. Jones**  
Maintenance,  
ORGDP  
35 years service



**George M. Kirtland**  
Special Services,  
Y-12  
34 years service



**John W. Landry**  
Planning and Systems  
Support, Y-12  
34 years service



**Ned M. Clark**  
Plant & Equipment  
ORNL  
31 years service



**William W. Miller**  
Maintenance,  
ORGDP  
31 years service

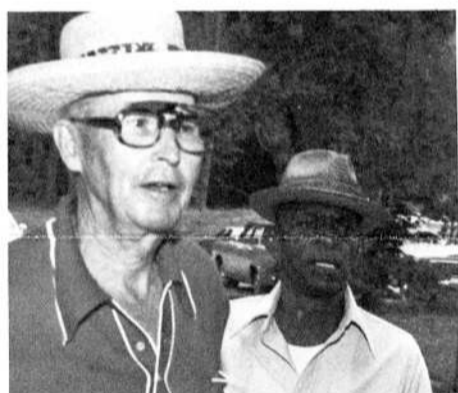


**Elmer W. Wilder**  
H-1 Foundry,  
Y-12  
27 years service

## Paducah retirees plan picnic for July 27

The Paducah Union Carbide Retirees Association held its June meeting at Jackson Purchase Electric Corp. Discussion centered around a report of the voluntary services committee and submission of the group's corrected by-laws.

The association is planning a picnic for July 27 at Noble Park. Meat, bread and drinks will be furnished by the group. Each member is to bring a plate, silver, covered dish, folding chair and games they would like to play.



## Picnicking retirees number 250-plus

Approximately 250 retired Nuclear Division employees (both Oak Ridge and Paducah) came to a picnic June 8 at the Clark Center Recreation Park. The membership table earned its keep, as 44 new members enrolled in the Union Carbide Retirees Association. The total now exceeds 800, with more than 720 in the Oak Ridge area.

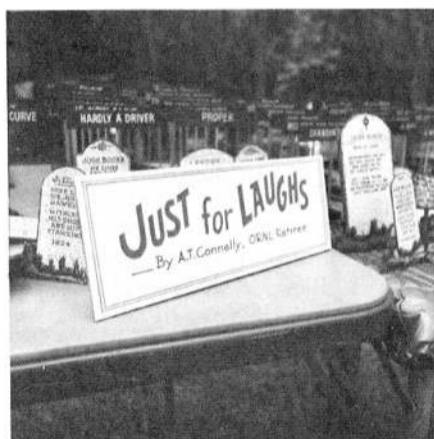
Distance did not deter a lot of retirees either: Thurston Morton and Dorcus came from Nitro, W. Va.; Nancy Stutts came up from Florence, Ala.; Janeen Croley motored in from Roswell, Ga.; and others came from Paducah, Crossville, LaFollette and outlying communities.

Justin Aylor, orchestra leader, provided music with assistance from band members Harvey Donahue, Newman Wise, Clyde McLemore and Fred Foster.

Alf Connelly displayed a collection of Burma Shave signs and some humorous gravestone inscriptions he has collected.

Hole-in-one winners were Jeanne Quarles and Carl Redding.

One of the highlights of the picnic was a dessert-swapping, showing that retirement does not dull the sweet tooth of the Nuclear Division employee!





## Detecting heart diseases

by T. A. Lincoln, M.D.

The first obvious sign or symptom of coronary heart disease which may have been present for many years too often is a sudden fatal heart attack. When first introduced, recording an electrocardiogram while the patient exercised was hailed as a major advance in the early detection of heart disease. Unfortunately, it was found to have many problems. Later coronary angiography, a special X-ray study of the coronary circulation, gave the necessary information, yet was too expensive and too risky for routine use. Myocardial perfusion imaging (MPI) is now regarded by most cardiologists as a major advance in meeting the need for a better diagnostic test.

*False test creates unjustified worry and anxiety—may prevent valuable exercise.*

The problem with the exercise (stress) electrocardiogram is the occurrence of false positives (the test appears to detect disease which really isn't there) or false negatives (the test appears to be negative yet disease appears to be present). The absolute criterion for the presence or absence of disease is a 70 percent blockage of one or several of the coronary arteries detected by the coronary angiogram. Unfortunately, this test is much more sensitive than any of the others. As a consequence, the stress electrocardiogram will miss a fair number of cases, i.e., may be a false negative. It may miss as many as 20 to 30 percent or even higher. Fortunately, false positives run only about 8 percent. A false positive creates unjustified worry and anxiety and may prevent a person from participating in a valuable exercise program. A negative test, the significance of which was not adequately explained and which was really a **false** negative, might encourage the patient to take unreasonable exercise risks.

Myocardial perfusion imaging usually involves the use of Thallium 201 which is a cyclotron-produced radionuclide. It has a small energy of emission and a 73-hour physical half-life. When it is administered intravenously, 70 to 80 percent is taken up by the heart muscle cells during the first pass through the coronary circulation. It maintains its initial localization for approximately one hour before a gradual redistribution occurs. The uptake is proportional to the blood flow through the heart muscle.

Areas of heart muscle supplied by critically narrowed coronary arteries may demonstrate normal tracer uptake at rest, but when the tracer is injected during exercise, they may show relatively decreased concentration when compared to

normally perfused areas. A sensitive scintillation camera is used to take radiation "pictures" of the heart using several different views.

MPI has been shown in several studies to be more sensitive (detects a positive when it is **really** positive), more specific (detects a negative when it is **really** negative) and more accurate (measures precisely what the defect is) than stress electrocardiography.

*Valuable information gained even when at rest.*

Stress electrocardiography remains the best diagnostic test because of the high cost and poor availability of MPI. In those cases where conduction defects, heart muscle thickening, certain drugs, and several other conditions may make stress electrocardiography difficult or impossible to interpret, MPI is a good alternative. It sometimes gives valuable information even when done at rest. The exercise MPI is a better test but sometimes could be hazardous, just like the stress electrocardiograms. The whole body radiation dose of 0.36 rads to the patient is not an important concern when compared to the urgency of detecting a potentially fatal disease. There is an important consideration, however, when the test is really not necessary and is being done primarily for thoroughness reasons.

*MPI is far from perfect.*

*Angiography too hazardous, expensive for routine use.*

Unfortunately, MPI is far from perfect. Sometimes, when an artery is partially blocked, blood supply can be obtained from collateral vessels which bring the needed blood to the deprived areas. If the muscle gets enough blood, regardless of from where it comes, both the stress electrocardiogram and the MPI will be normal even though disease is present. In studies which compared the effectiveness of MPI, stress electrocardiography and angiography, it is clear that the first two will miss some of the obstructive lesions which can only be detected by the last technique. We are back to the old problem! Angiography is too hazardous and expensive for routine use. Of course, if surgery is being considered, it is absolutely necessary.

MPI is of value as a next step when stress electrocardiography does not appear to be adequate and the need justifies the cost and the radiation exposure. This is a judgment decision, and requires the advice of a capable cardiologist.

## Luncheon honors inventors



**LUNCHEON ATTENDEES**—Division employees who received "Dollar Letters" in 1978 in connection with patents awarded for their inventions were the guests of honor earlier this month at the Division's annual patent luncheon. A total of 119 inventions were reported to DOE by the Nuclear Division in 1978; of these, DOE filed patent applications on 59.

The 81 Nuclear Division employees who received "Dollar Letters" in 1978 in connection with patents awarded for their inventions were honored June 12 at the Division's annual patent luncheon, held at the Holiday Inn in Oak Ridge. Guest speaker at the luncheon was Samuel W. Tinsley, director of corporate technology for Union Carbide's corporate headquarters in New York.

A Dollar Letter is a congratulatory letter — accompanied by a new dollar bill — sent by Nuclear Division President Roger F. Hibbs to employees whose inventions have been patented. Since the Nuclear Division is a DOE contractor, DOE is the actual recipient of the patents.

More than 260 potential inventions were reported to the Nuclear Division's Patent Section in 1978 for further investigation. Of these, 119 were disclosed to DOE — bringing the total number of inventions reported by the Division to more than 3,800. DOE filed 59 patent applications in 1978 on Nuclear Division inventions.

Inventions arising from ORGDP and PGDP included barrier improvements, cascade equipment improvements and improved



**Guest Speaker Samuel W. Tinsley**

uranium hexafluoride recovery techniques. At Y-12, inventions included innovations in carbon and graphite processing; ultra-precision machining, including laser mirror fabrication; improvements in alloy and metallurgical processing, and management of industrial waste materials.

Among ORNL inventions were innovations in fusion research and advanced fuel development, nuclear fuel reprocessing, research in alternate energy sources and advancement in instrumentation technology.



**JUNIOR ACHIEVEMENT HONORS**—J.A.S.T., a Junior Achievement Company sponsored by the Nuclear Division, received the "Best Company—Region II" award at ceremonies recently in Knoxville. Reviewing the company's annual report are, from left, Roger F. Hibbs, Nuclear Division President; Norman Sparks, General Accounting, advisor to the company; and Kai Fu Lee, president of J.A.S.T. Other advisors were Martin Delozier, Purchasing; Carl Peterson, ORGDP Shift Operations; and F. M. Downs, ORGDP Fabrication and Maintenance. The Junior Achievement Company manufactured silk-screened T-shirts.

recreationotes. . .

Golf tournaments

ORGDP-Wallace Hills. . . Y-12—Dead Horse. . .

Alvin Boatwright (who's about to change his name to Alvin Golfwright!) was two-over-par at Wallace Hills as K-25 duffers took to the greens. His 74 was low; Dave Lannom placed second with 75.

Handicap laurels were earned by R. W. Lynn, 79; and Bob Human, 84.

Flight two went to Ted Bartlett, 83; and Dan Hinton, 85. Handicap lows went to Ken Brown, 87; and Ted Shapiro, 85.

Flight three belonged to K. W. Keever, 85; and L. J. Davis and H. E. Aguirre, 93 each. Handicap scores were carded by Seth Wheatley, 90; and David Weishaar, 95.

Golf balls may be picked up by the winners at Peggy Collier's, Room 113, K-1001.

Calvert City scrabble

Paducah golfers encountered the blazing summer sun for the first time this season, as they battled for top spots in the Calvert City scrabble.

Leading the low scorers with a six under were Phil Brown, Manley Fortune, Chan Hale and Gary Spear. Falling into second place were Mike Flood, Vernon Brown, Tony Morphew and Jerry Smith. Third place prizes went to Bob Moss, Jeff Vandeven, Bob Siegfried and Donna Curtis.

The Village Green will host the next scrabble on July 21. Deadline for entry is noon, July 18.

Next issue. . .

The next issue will be dated July 12. The deadline is July 3.

Ted Littleton led the pack of Y-12ers at Dead Horse Lake, also scoring a one-under-par. Jim George packed in a 75 score to take second place.

W. A. Rutherford, Dave Dveritt and John Towle all scored 76 to take handicap honors in the first flight.

B. M. Burris scored an 82 for scratch lows in flight two, as T. L. Rea brought in an 83 card. Dave Fortune scored a 90 for handicap lows; as George Cozart tallied an 84.

Flight three belong to G. Killough, 82; and Ray Ellis with a 90. Handicap lows went to R. E. Ruley, 91; and J. A. Moretz, 92.

Golf balls may be picked up from the Recreation Office, Building 9711-5.

ORNL—Cedar Hills. . .

Henry Tuck took the May tournament for ORNL, one-under-parring the course at Cedar Hills. D. Dutton and W. Miller tied for second place, posting a final card of 75.

Handicap winners in the first flight saw J. Wiggins score a 79; J. Johnson an 80.

Flight two went to J. Teague with 78; and a three-way tie for second place as B. George, A. Joiner and L. Manley scored 81's. Handicap honors were gleaned by G. Holt, 80; and F. Schmollinger, 82.

Flight three went to R. Green, 82; and W. VanPelt, 83. Handicap lows went to J. Scott, 88; and Jack Rich, 83.

Winners may pick up their loot from Debbie Walker, Room J-108, 4500N.

Skeet league

The April winners in the Carbide Skeet League were Russell Allstun, 49.050; Alan Van Hull, 48.610; and John Basler, 47.600.

Three(?) Stooges take first women's bowling league on Paducah's hardwood



Stella Bell



Shirley Shumpert



Pearl Bell



Laurretta Hollis

The Paducah Plant Women's Bowling League completed its first season with the Three Stooges (Shirley Shumpert, Laurretta Hollis, Pearl Bell and Stella Bell) in first place. Finishing second by half a game was HiHopes (Janet Farmer; Loyce Sternberg, Doris Jones and Connie Sykes).

Standings of other teams were: The Stars, third; Pin-ups, fourth; Gutter Gals, fifth; Alley Cats, sixth; The Splits, seventh; and Strikers, eighth.

The Stars (Lo Williba, Elizabeth Wilks, Rebecah Bramley, and Toni McCutcheon) took top honors with high team game (673) and high team

series (1835). Gutter Gals (Martha Downey, Marie Lewis and Diane Bennett) rolled second high team game with 669 and HiHopes second high team series with 1829.

Alice Kidd and Loyce Sternberg scored high individual games with 264 and 258, respectively. Doris Jones with 644 and Rebecah Bramley with 639 had highest individual series. Cynthia Webb was the most improved bowler. She added 16 pins to her average.

Although no prizes were awarded for scratch games, we cannot let Laurretta Hollis' 236 scratch go unnoticed.

Tee-Off Time Application for July 28, 1979

☐ ORGDP—Bays Mountain
 ☐ Y-12—Chestuee Golf Course
 ☐ ORNL—Dead Horse Lake

Foursome will Ride  
 Yes ☐ No ☐

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_ LEADER

PHONE \_\_\_\_\_  
 BLDG. \_\_\_\_\_  
 TEE-TIME \_\_\_\_\_

Foursomes that ride carts will receive earlier time  
 COMPLETE AND RETURN TO THE Y-12 RECREATION OFFICE  
 BUILDING 9711-5, MS-001

Entries must be received prior to drawing on July 25, 1979.

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Golfers are responsible for reserving their own carts by contacting the pro shop following drawing for tee-off times. The leader ONLY for each foursome should call the Recreation Office, 4-1597, after 3 p.m., Wednesday for your time.

Bowling leagues. . . Softball standings. . .

Monday Mixed. . .

After the first week of play at the Western Plaza Lanes, half the league is tied for first place; the other tied for the basement, as sweeps were the order of the day in the Monday Mixed League. Cherly Womack has both high game, 236; and high series, 584. Bill Muenzer took a high game of 223; as Churchill Moore led the men with a 563 series.

Family Mixed. . .

After two weeks of action, the Family Mixed League lead goes to the Smooth Stokers, one game over the Roadrunners. Jennie Saffell holds the high game of 251 and series of 662. C. R. Lively has a high game of 228 and series of 647.

The Carbon League is the first of the Softball Leagues reporting in with standings. (There are 75 teams—between 1350 and 1500 men and women involved!)

Carbon League - West standings are as follows:

Team	Won	Lost
Wild Turkeys	4	0
Labor Gang	6	1
Bandits	4	1
Crippled Turkeys	4	2
QA&I	4	2
Uptowners	3	2
Body Burdens	3	2
Bits and Pieces	3	2
The Pits	3	3
Coneheads	2	3
Fed-II	2	4
Financial Disasters	2	4
The Loose Balls	1	3
Bombers	1	5
Fly Swatters	0	4

## division death. . .



Mr. Chandler

Mr. Moore



Mrs. Mitchell

**William M. Chandler**, Y-12 Alpha Five Processing, died June 19 in a Knoxville hospital. A native of Knoxville, he first came to Y-12 in 1953.

Survivors include his wife, Maxine Lilly Chandler, 5209 Bluefield Road, Knoxville; a daughter, Jo Ann Powell; two sons, David and Eddie; three brothers, Howard, Lynn and Harold; and eight grandchildren.

Graveside services and burial were at the Woodlawn Cemetery, Knoxville.

**Fred H. Moore Jr.**, Y-12 Utilities Administration, died June 12 at the Harriman Hospital. A native of Chattanooga, he joined Union Carbide in 1978, after working with the Lone Star Industries. A veteran of the U. S. Marine Corps, he held a BS degree in engineering physics from the University of Tennessee-Chattanooga.

Survivors include his wife, Frances Smiddie Moore, River Road, Kingston; a son, Kenneth; a daughter, Elizabeth; his mother, Hassie Y. Moore; and a brother, Charles R.

Services were held at the Kyker Funeral Chapel, with burial in Kingston Memorial Gardens.

The family requested that any memorials be in gifts to the East Tennessee Heart Association, c/o Evelyn Brooks, Hamilton First Bank, Jackson Square, Oak Ridge 37830.

**Marguerite S. Mitchell**, a materials preparation worker in the Biology Division, died May 7 in the Baptist Hospital, Knoxville. She worked seven years in Biology and lived at Route 5, Milroy Lane, Knoxville.

Survivors include her husband, Joseph A. Mitchell Sr., and sons, Joseph A. Jr. and Marshall.

Services were held at New Hope Baptist Church, with burial at the church cemetery.

## Independence Day

Wednesday, July 4, is an official holiday for Nuclear Division employees. No one is required at work unless his/her presence is required for continuous operation or plant security.

Independence Day marks the country's 202nd birthday.

## Surplus sale set

A surplus sale of used government equipment is in progress at the Oak Ridge sales office. Included in the "spot bid" sale are office equipment and vehicles.

The material may be inspected from 8:10 a.m. to 4:15 p.m. through June 10, including Saturdays, June 30 and July 7. The equipment is at the Sales Office, ORGDP, Powerhouse Area, Building K-722, located off State Highway 58.

The sale will begin at 9 a.m., July 11.

## anniversaries. . .

### Y-12 PLANT

#### 35 YEARS

Mary Helen Cunningham, Plant Records; Mark D. Varnadore Jr., Buildings, Grounds and Maintenance Shops; Porter L. Holland, Research Services; James C. Nelson, Radiation Safety; Thomas E. Barnes, Utilities Administration; and Dorothy R. Moore, Plant Laboratory.

#### 25 YEARS

Roger W. Cloyd, Charles T. Eldridge, Warren Shadden, John K. West, Carl Parks, John S. Hurst, Johnny D. Moore, Loyd S. Stansberry, Don D. Forrester and Carl S. McMurray Jr.

#### 20 YEARS

Effie C. Allison, Spencer F. Ferguson, Vernon Smith, Barbara L. Bowers, Raymond S. Fletcher, Clinton R. Martin and Romeo F. Greene.

### ORGDP

#### 35 YEARS

George H. Miles, Maintenance; James V. Mason, Operations; Charles E. Seiber, Grounds Maintenance Department; and Edna Ruth Cary, Operations Planning Department.

#### 20 YEARS

Leroy S. Desgranges.

### ORNL

#### 35 YEARS

Noah L. Ensor, Biology; James E. Ferguson, Operations; Clyde L. Mayes, Plant and Equipment; and Paul E. Phillips, Operations.

#### 30 YEARS

Milton H. Lietzke, Chemistry; Ross N. Everett, Plant and Equipment; Martha Anderson, Information; and Herbert E. Trammell, Engineering Technology.

#### 25 YEARS

Bobby L. Byrum, James R. Tarrant, John Q. Hopwood, Jackson H. Devan and Robert E. Clausen.

#### 20 YEARS

Albert E. Williams, David L. McElroy, Murrell E. Pruitt, Thomas H. Row, George R. Satchler and Inez T. Fann.

## High power rifle league

Don Kiplinger of ORNL won the fourth match of the high power rifle league with a 462 out of 500. Roger Wiegand of Y-12 was second with a 460, and Hugo Bertini, ORNL, third with a 447.

Other scores were: L. Weston, ORNL, 446; M. A. Baker, ORNL, 354; and P. L. Glover, ORNL, 326.



## Gilliam promoted to supervisor

Cecil L. Gilliam has been promoted to a buildings and grounds supervisor in the Field, Transportation and Support Services Department at ORNL.

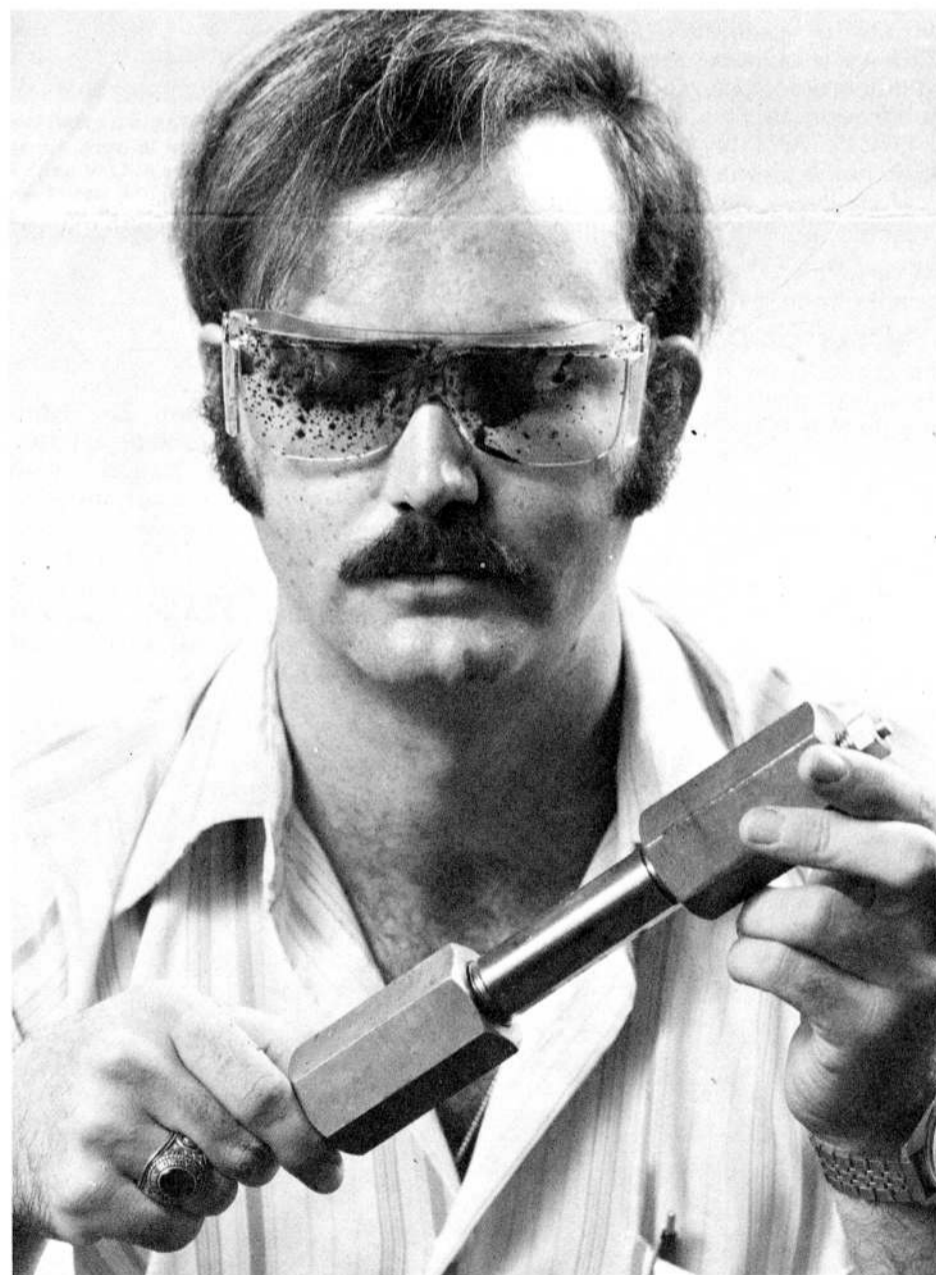
A native of Baltimore, he attended Morgan State College, and worked for the University of Tennessee and State Technical Institute before joining Union Carbide in 1976.

Gilliam and his wife, Janice, who works for Allied Chemical, live at 2322 Woodbine Avenue, Knoxville.

## Savings Plan-Personal Investment Account

	Fixed Income Fund	UCC Stock	Equity Investment Fund
December 76	13.0553	59.2723	8.8166
December 77	14.2017	40.9096	8.0427
March 79	15.8172	38.4617	8.8084
April 79	15.9324	38.5964	9.0100
May 79	16.0500	37.1485	8.8840

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.85% for 1978. Union Carbide stock values are the average cost of stock purchased during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price of each unit is determined by dividing the total value of the securities by the number of units in the Fund.

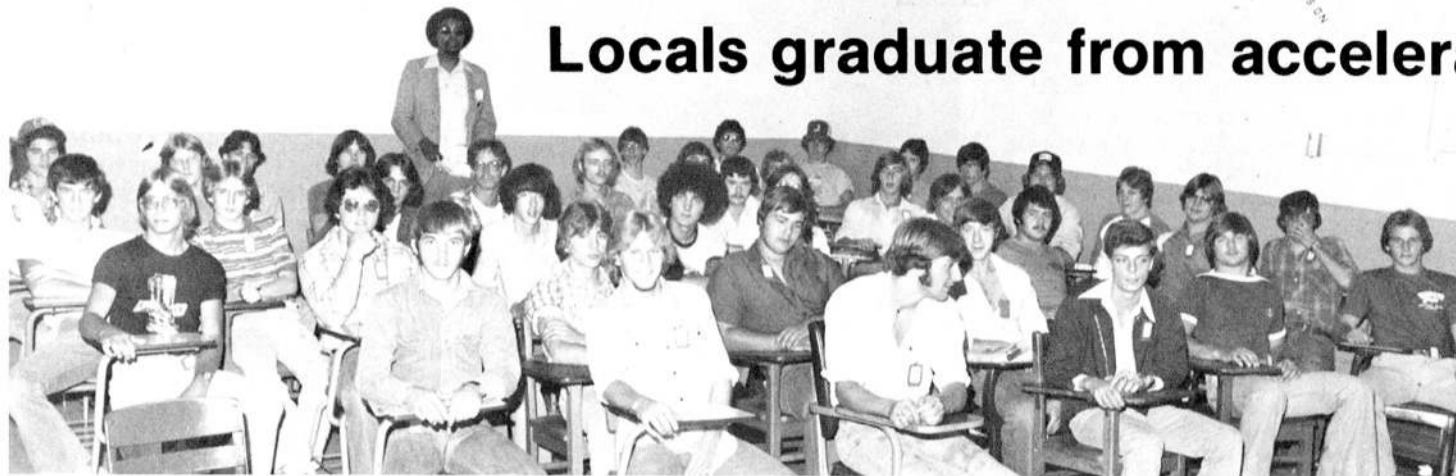


Terry Sams, ORNL's Chemical Technology Division, saved his eyesight by wearing safety glasses. A chemical splash occurred when he was opening a small steel bomb, containing a mixture of carbolic acid and ground coal.

After the bomb had cooled, Sams partially unscrewed one of the caps and left the bomb in a hood so that the gas could escape. He picked up the bomb to remove the cap, and without warning, the contents squirted out of the hole onto his face.

Sams received chemical burns to his forehead, cheeks and chin, but his eyes were saved because he was wearing safety glasses.

## Locals graduate from accelerated TAT course



**SELECTED TAT STUDENTS**—These new TAT students, selected from recent high school graduates with previous training in welding and machining, have begun a special 16-week course at the Training and Technology project at Y-12. Although the normal TAT course is six months in duration, it is theorized that these participants may progress faster than students with no prior training in welding and machining. Standing with the group is Charles Jackson, training service officer for Oak Ridge Associated Universities.

### wanted. . .

#### ORNL

**JOIN CAR POOL** from Concept 21 or West Town Garden Apartments, Knoxville, to East Portal, 8-4:30 or 8:15-4:45. Susan Kaplan, plant phone 4-5398, home phone 693-2617.

**RIDE ONLY** from UT area, Knoxville, to East Portal, 8-4:30. Darlene Anderson, plant phone 4-7778.

**FIFTH CAR POOL MEMBER** from vicinity of Landmark Subdivision, Country Club Apartments, Middlebrook Pike and Gulf Park Subdivision to East or West Portal, 8:15-4:45. A. Tate, plant phone 4-4576, home phone 693-9235.

**TWO VAN POOL RIDERS** from West Knoxville to any portal, 8-4:30. Mike Caldwell, plant phone 4-4885, home phone, 691-1615.

**RIDERS FOR VAN POOL** from West Knoxville to any portal, 8-4:30. Dean Treadway, plant phone 4-6580, home phone 584-4879.

#### Y-12 PLANT

**CAR POOL MEMBER** from Sutherland Avenue, Paper Mill Road sections, Knoxville, to East, North or Central Portal, straight day. Debbie Hendrix, plant phone 4-7886, home phone Knoxville 584-6662.



**ANDERSON COUNTY TAT STUDENTS**—Graduates from Anderson County high schools participating in the special 16-week course at the Training and Technology project receive a machine tool briefing from R. L. Gouldy, Y-12, a training officer with the TAT project. Left to right in front are, Ken Adamski, Steve Payne, Raymond Dawson and Sam Teague. In the back row are Wesley Miller, Joe Darnell, James McAlister and Larry Kidwell. Their TAT course will be accelerated from the usual six months because of their high school training in machining or welding.

#### ORGDP

**RIDE wanted** from 216 North Purdue Avenue, Oak Ridge, to Porta 2 or 4, R Shift. John Hagood, plant phone 4-8650, home phone Oak Ridge 482-3875.

**JOIN CARPOOL** from Powell to Building K-1007, 7:30-4 or 7:45-4:15. Pat Finley, plant phone 4-9457, home phone 947-8026.

Thirty-nine high school graduates from schools in the local area began special 16-week courses in welding or machining at the Training and Technology (TAT) project June 11.

The 39 new trainees were selected from schools offering vocational training: Oak Ridge High School, the Anderson County Center for Occupational Learning, Campbell County Comprehensive High School, and the vocational high school systems of Morgan and Roane Counties. All participants have had previous training in welding or machining.

The normal TAT course is six months long. The TAT operators hope that, because of their previous training, the special course participants will progress faster than those with no background in welding or machining.

The goal of the pilot project is to take advantage of area vocational training systems to provide DOE contractors with another source of skilled manpower.

TAT, operated jointly by Oak Ridge Associated Universities and the Nuclear Division since 1966, is carried out at Y-12.

### Patents granted. . .

To Carl D. Reynolds and Zane L. Ardary, both of the Y-12 Plant, for "Antisotropic Fibrous Thermal Insulation of Relative Thick Cross Section and Make of Same."

To Harry C. Corey III, Y-12 Plant, for "Microinterferometer Transducer."

### safety scoreboard

Time worked without a lost-time accident through June 21:

Y-12 Plant	77 Days	2,515,000 Employee-Hours
ORGDP	191 Days	6,223,289 Employee-Hours
ORNL	90 Days	2,123,754 Employee-Hours
Paducah	28 Days	341,000 Employee-Hours

### Animals on the reservation. . .



**CALL OF THE WILD**—The whipperwill, whose lonesome mating call is heard throughout the area, is a beast apparently afraid of neither man nor machine. This mama bird built her nest near a roadway of a Materials Department storage area at ORGDP, and there awaits the arrival of her young.

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